

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
6 May 2004 (06.05.2004)

PCT

(10) International Publication Number
WO 2004/037357 A1

(51) International Patent Classification⁷: A63C 5/00, 17/00

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:

PCT/AU2003/001423

(22) International Filing Date: 28 October 2003 (28.10.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2002952288 28 October 2002 (28.10.2002) AU

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant and

(72) Inventor: HALFACREE, Graeme, Scott [AU/AU]; 319 Fitzroy Street, Fitzroy, Victoria 3065 (AU).

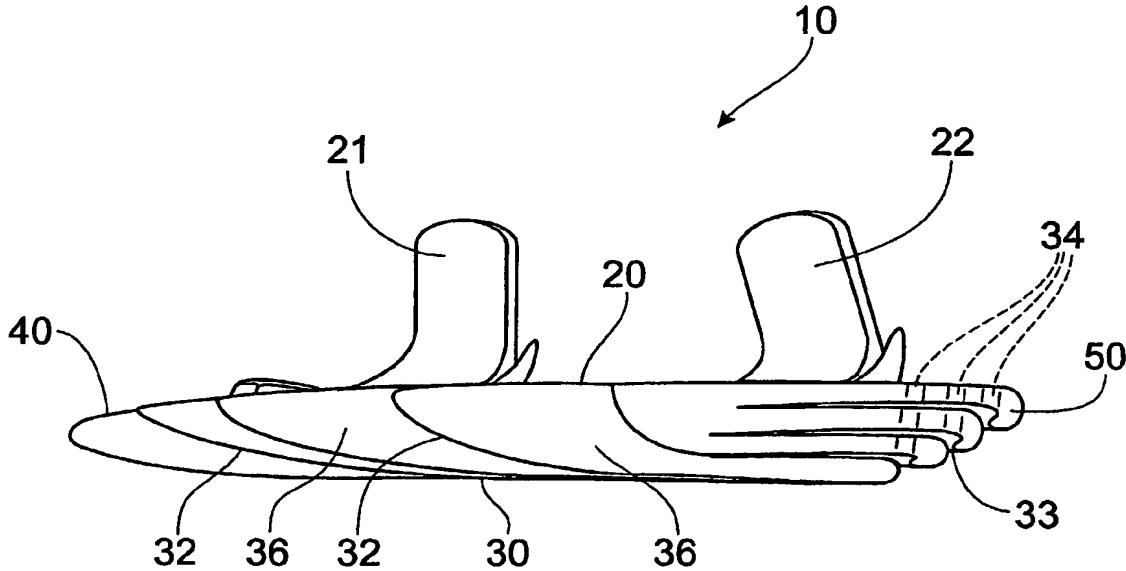
(74) Agent: FISHER ADAMS KELLY; Level 13 AMP Place, 10 Eagle Street, Brisbane, Queensland 4000 (AU).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A RECREATIONAL BOARD



WO 2004/037357 A1

(57) Abstract: A recreational board (10) travelling across a medium, said recreational board (10) comprising: a board (10) having a top surface (20) and a bottom surface (30); said top surface (20) supporting a user positioned on said recreational board (10); and said bottom surface (30) contacting the medium on which the board (10) travels; wherein the bottom surface (30) includes a plurality of grooves (32) that radiate from a central zone (31) on said bottom surface (30) to adjacent a side edge of the bottom surface (30).

TITLE**A RECREATIONAL BOARD**
FIELD OF THE INVENTION

This invention relates to a recreational board. In particular, the
5 invention relates to a recreational board for use on snow and therefore will
be described in this context. However, it is envisaged that the recreational
board may be used on other surfaces such as water, sand, rock, grass and
air.

BACKGROUND OF THE INVENTION

10 In recent years, snowboarding has become a very popular
winter sport. Most snowboards are made from substantially elongate,
flexible fibreglass panel. The front and rear of the snowboard are turned
upwardly with an intermediate portion being substantially planar. Straight
edges of the intermediate portion are used to turn the snowboard whilst the
15 upturned edges of the front and rear prevent the snowboard digging into the
snow.

20 To ride a snowboard down a piste, it is important that a user
constantly rocks their feet backward and forward so that a user does not dig
the edge of the snowboard sharply into the snow, known as "catching an
edge". "Catching an edge" causes the user to be flung down the piste often
causing injury. Unfortunately, "catching an edge" is easily achieved when the
user is a beginner.

25 To slow or stop the snowboard when riding a snowboard down
a piste involves turning the snowboard. A beginner, or even an experienced
user, will therefore find it difficult to stop or slow down when on a narrow
piste due to sharp turns being required. Further, as often many turns are
required to slow a snowboard, the "chances of catching" an edge are greatly
increased.

OBJECT OF THE INVENTION

30 It is an object of the invention to overcome or alleviate one or
more of the above disadvantages or provide the consumer with a useful or
commercial choice.

SUMMARY OF THE INVENTION

In one form, although not necessarily the only or broadest form, the invention resides in a recreational board for travelling across a medium, said recreational board comprising:

- 5 a board having a top surface and a bottom surface
 said top surface supporting a user positioned on said
 recreational board; and
 said bottom surface contacting the medium on which the board
 travels;
- 10 wherein the bottom surface includes a plurality of grooves that
 radiate from a central zone on said bottom surface to adjacent a side edge of
 the bottom surface.
 The board may be shaped so that a front portion of the board is
 narrower than a rear portion of the board. Preferably, the board tapers from
 the rear portion of the board to front portion of the board.
- 15 The board may be constructed from any suitable material such
 as fibreglass or polycarbonate resin.
 The top surface of the board may contain bindings to attach
 one or more feet to the board. Preferably there are two bindings. The rear
 binding may be inclined so that a front of the foot is positioned lower than a
 heel of the foot.
 Preferably, the bottom surface is convex. Preferably, the front
 portion and rear portion are turned upwardly.
- 20 The grooves may extend forwardly from the central portion to
 the sides. Preferably, the grooves extend from the central portion to both
 sides of the board.
 The rear portion may also include a brake to slow or stop the
 board. Preferably, the brake includes at least one channel that engages with
 the medium on which the board is travelling. Normally, there are a plurality
 of channels. The brake may be engaged by inclining the board rearwardly.
- 25 The recreational board may be a snowboard, sand board or
 water board, grass, rock and air board.

BRIEF DESCRIPTION OF THE DRAWINGS

Embodiments of the invention, by way of example only, will be described with reference to the accompanying drawings in which:

5 FIG 1 is a side perspective view of a snowboard according to a first embodiment of the invention.

FIG 2 is a top view of the snowboard shown in FIG 1.

FIG 3 is a rear perspective view of the snowboard shown in FIG 1.

10 FIG 4 is a front perspective view of the snowboard shown in FIG 1.

FIG 5 is bottom view of the snowboard shown in FIG 1.

FIG 6 is another top view of the snowboard shown in FIG 1.

FIG 7 is a sectional view of the snowboard of FIG 6.

15 FIG 8 is a bottom view of a snowboard according to a second embodiment of the invention.

FIG 9 is a side view of the snowboard of FIG 8.

FIG 10 is a sectional view of a snowboard of FIG 8.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

20 Referring to the figures, a snowboard 10 is shown having a top surface 20 and a bottom surface 30. The snowboard also has a pointed front portion 40 and a curved rear portion 50. The snowboard 10 is manufactured from fibreglass and is substantially wedge shaped.

25 The top surface 20 of the snowboard is substantially flat. Two bindings 21 and 22 are fixed to the top of the snowboard in a conventional manner such as using adhesives and/or fasteners. It should be appreciated that different bindings may be used dependant upon the type of shoe used. For example, FIGS 1 and 2 show bindings 21 and 22 for soft shoes. However, the bindings may be replaced with bindings that allow for the use of hard shoes.

30 The rear binding 22 is inclined so that a user's heel is higher than a front part of a user's foot. This allows for greater control of movement of the snowboard 10 as well as providing greater comfort to a user when

riding the snowboard 10.

The bottom surface 30 is substantially convex. The bottom surface 30 has a central portion 31 from which extend a series of grooves 32. Each of the grooves 32 extend forwardly from the central portion 31 to 5 their respective sides of the snowboard 10.

Between each groove 32 is a land 36. A front part 36A of the land is relatively steep with a rear part 36B of the land 36 gradually tapering away to an adjacent groove 32 as shown in FIG 7.

Channels 33 are located at the rear portion of the snowboard 10. The channels 33 are of a greater depth compared with the depth of the grooves 22. The channels 33 are provided to brake the snowboard to slow or stop the snowboard. Holes 34 are located within the channels 33 to prevent snow from building up within the channels 33.

In use, a user binds their feet to the snowboard 10 using 15 respective bindings 21 and 22. The inclined position of the rear foot of a user assists a user in enabling the snowboard 10 to be swayed both from side to side and also be titled upwardly.

To steer the snowboard 10, a user leans their body weight to the left or right of the snowboard 10. This causes the front part 36A of each 20 of the forward facing lands 36 located between the grooves 32 to engage with the snow to turn the snowboard 10. When travelling in a straight line, the lands 36 do not substantially engage the snow due to the bottom surface 30 being convex. No grooves 32 and hence no lands 36 are located on the central portion 31.

To stop or slow the snowboard 10, a user lifts their front foot 25 and leans backwardly on their back foot to cause the board to be titled upwardly. This causes the channels 33 located in the rear portion 50 to plough into the snow thus braking the snowboard 10. Snow passes through the holes 34 within the channels 33 so that the channels 33 continue to 30 brake the snowboard 10.

FIGS 8 to 10 show another embodiment of the invention. In this embodiment the grooves 32 are wider whilst the lands 36 are narrower

and sharper. The narrower and sharper lands 36 allow the snowboard to be more responsive than the snowboard described in FIG 1 to FIG 7. However, both snowboard uses the same principles to turn the snowboard.

5 The above snowboards 10 enables users to turn sharply, travel easily in a straight line and stop or slow the snowboard without turning.

It should be appreciated that various other changes and modifications may be made to the embodiment described without departing from the spirit or scope of the invention.

CLAIMS:

1. A recreational board for travelling across a medium, said recreational board comprising:
 - a board having a top surface and a bottom surface;
 - 5 said top surface supporting a user positioned on said recreational board; and
 - 10 said bottom surface contacting the medium on which the board travels;
 - wherein the bottom surface includes a plurality of grooves that radiate from a central zone on said bottom surface to adjacent a side edge of the bottom surface.
2. The recreational board of claim 1 wherein the board is shaped so that a front portion of the board is narrower than a rear portion of the board.
3. The recreational board of claim 2 wherein the board tapers from the 15 rear portion of the board to front portion of the board.
4. The recreational board of claim 1 wherein the top surface of the board contains bindings.
5. The recreational board of claim 4 wherein there are two bindings.
6. The recreational board of claim 5 where a rear binding is inclined with 20 respect to the top surface of the board.
7. The recreational board of claim 1 wherein the bottom surface is convex.
8. The recreational board of claim 2 wherein the front portion and rear portion are turned upwardly.
- 25 9. The recreational board of claim 1 wherein the grooves extend forwardly from the central portion to respective sides of the board.
10. The recreational board of claim 2 wherein the rear portion also includes a brake.
11. The recreational board of claim 10 wherein the brake includes at least 30 one channel.
12. The recreational board of claim 11 wherein there are a plurality of channels.

13. The recreational board of claim 1 where the recreational board is a snowboard, sand board, water board or air board.

5

DATED this Twenty-eighth day of October 2003
GRAEME SCOTT HALFACREE
By Its Patent Attorney s
FISHER ADAMS KELLY

1 / 4

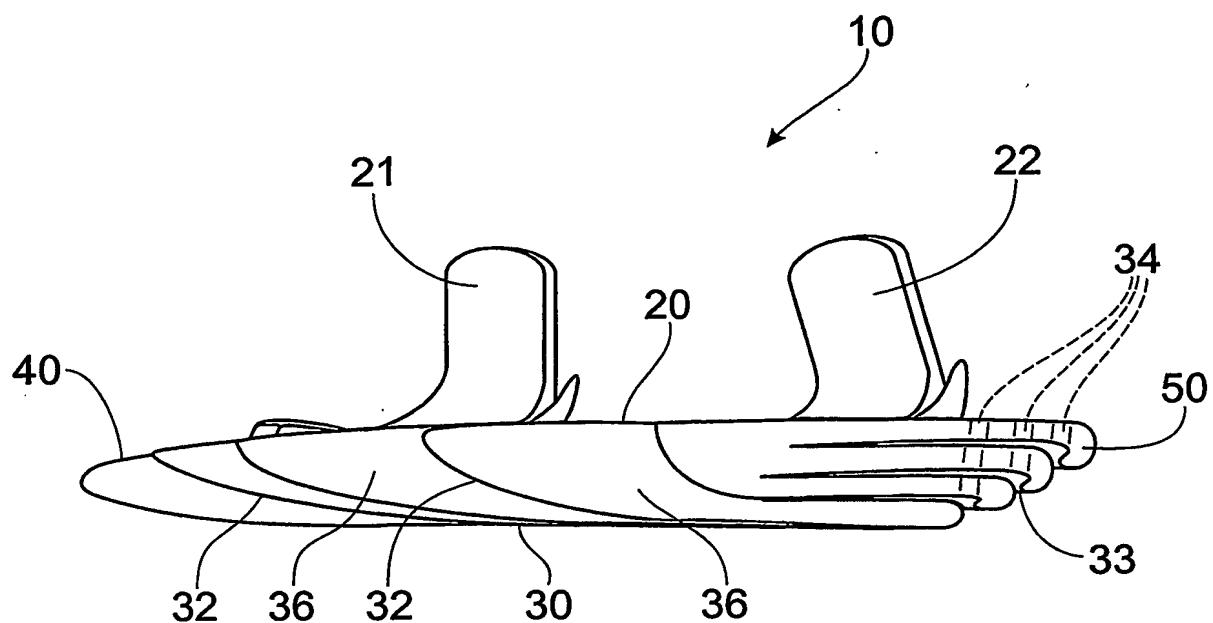


FIG. 1

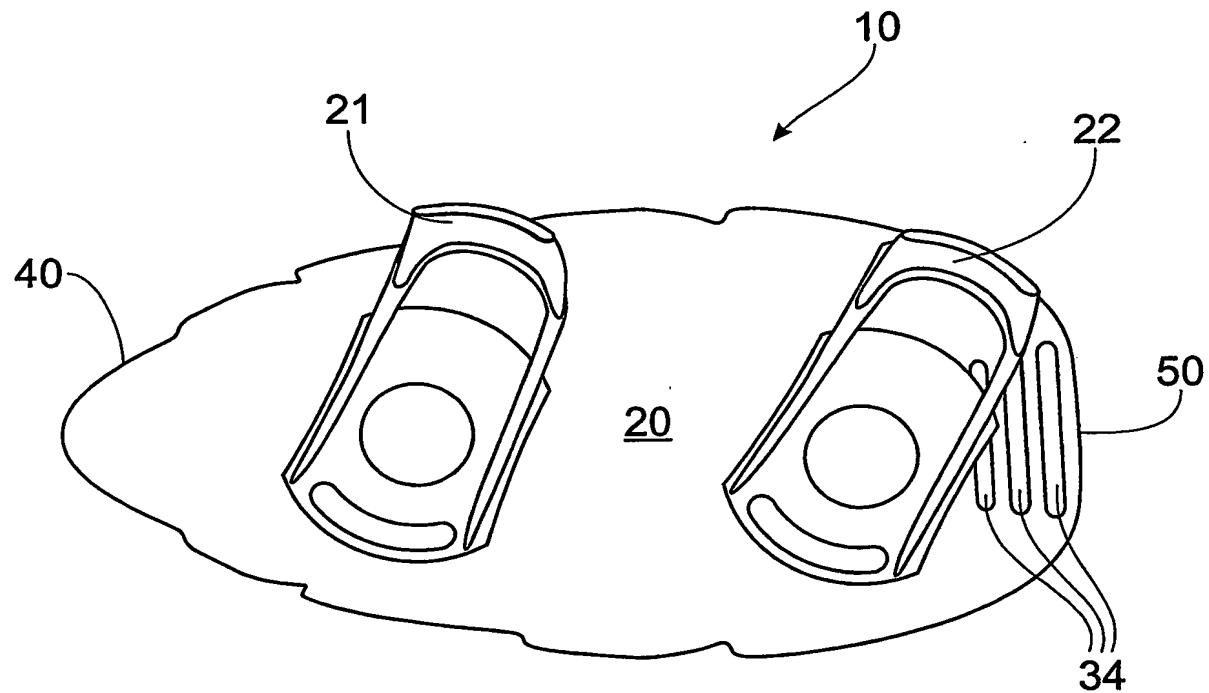


FIG. 2

2 / 4

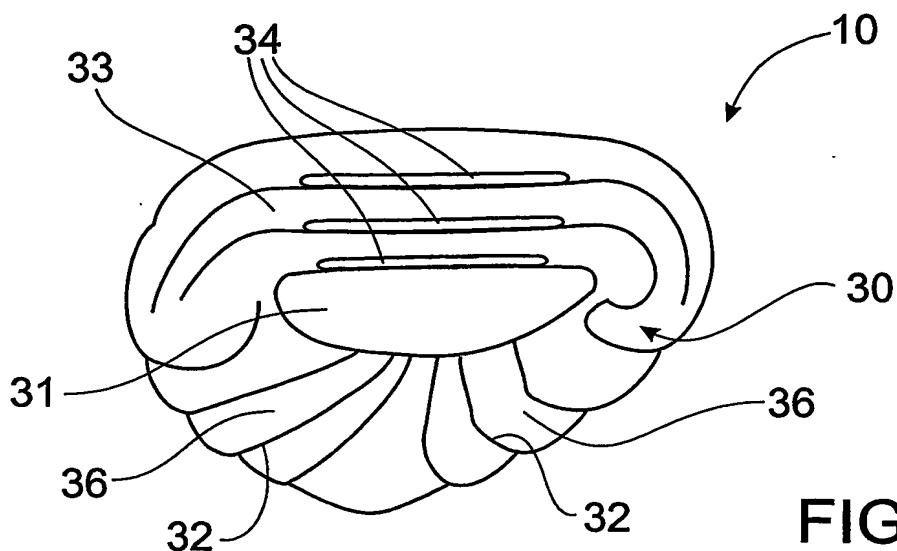


FIG. 3

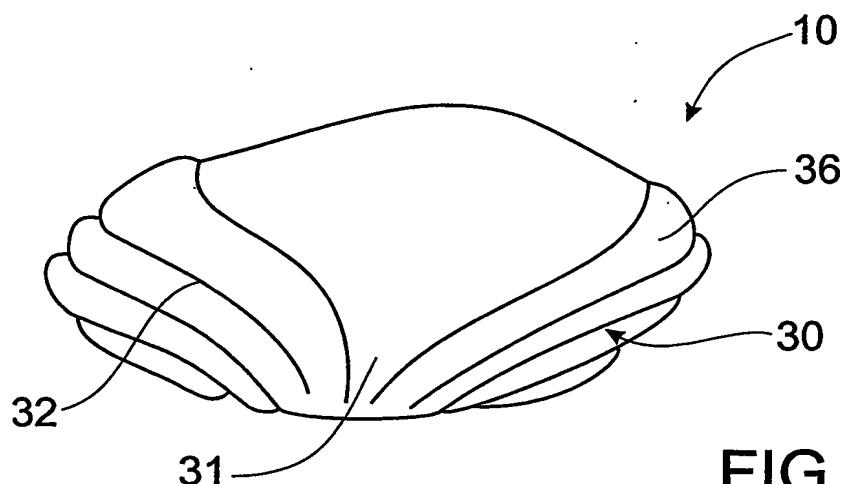


FIG. 4

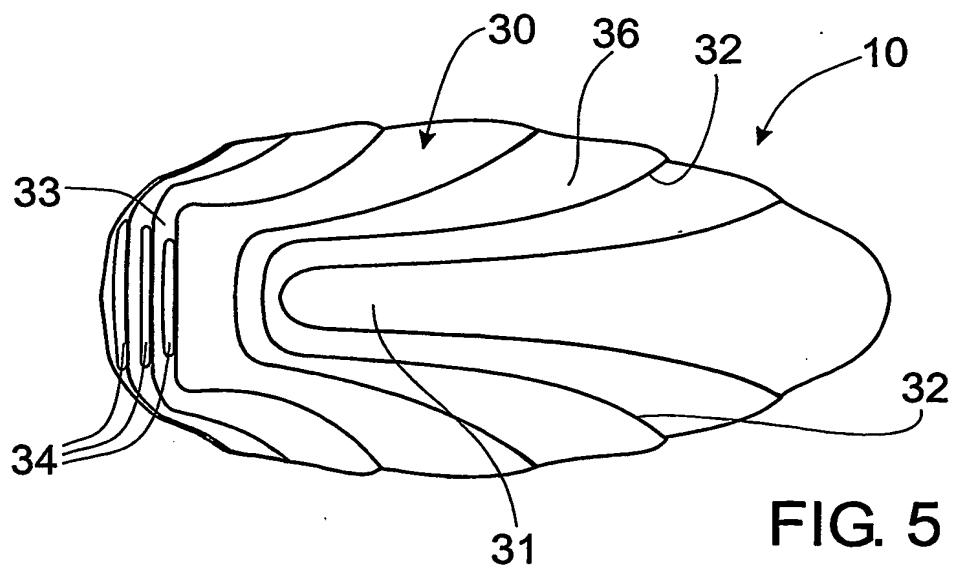


FIG. 5

3 / 4

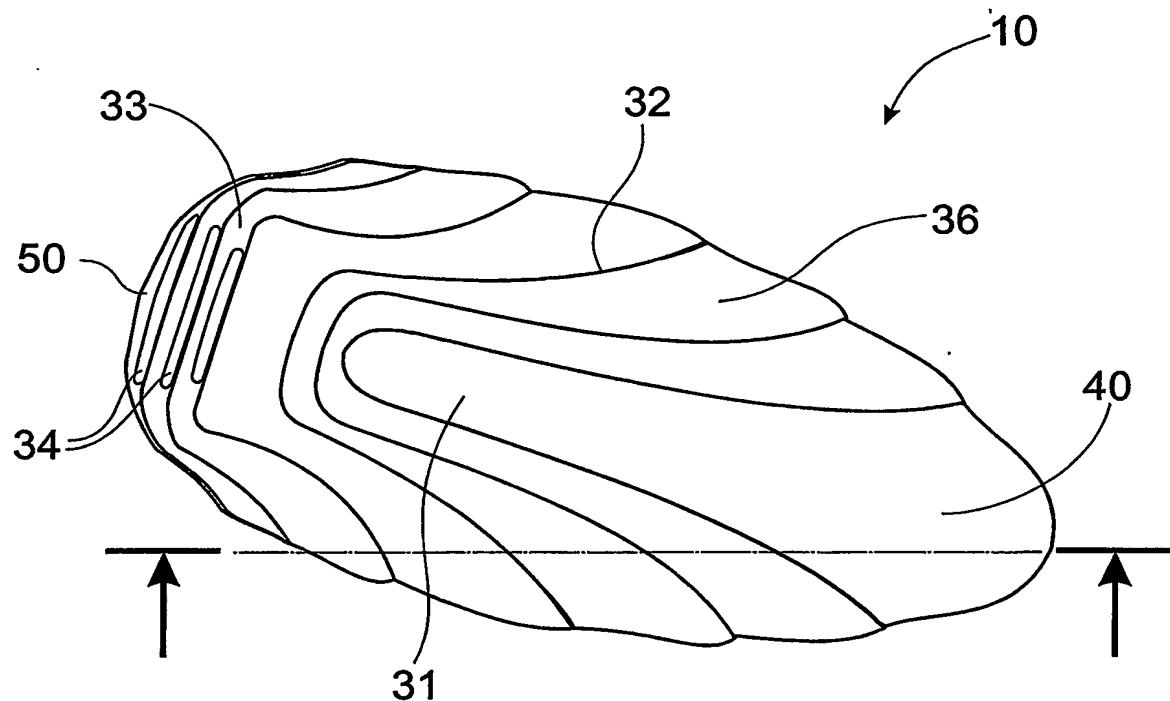


FIG. 6

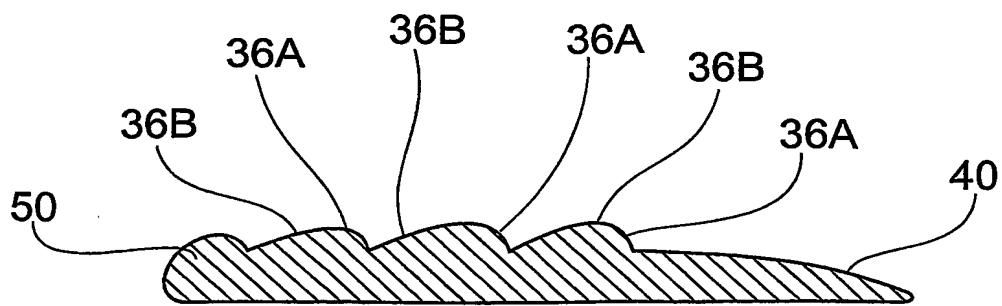


FIG. 7

4 / 4

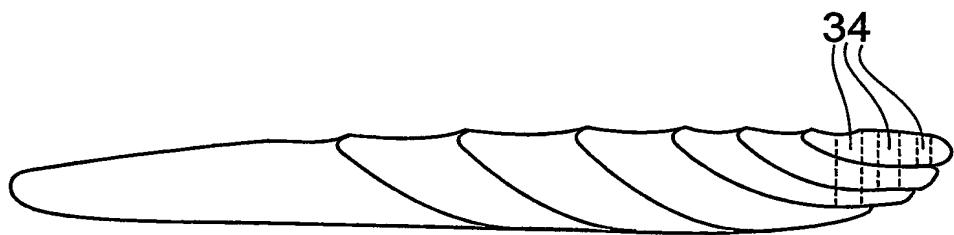
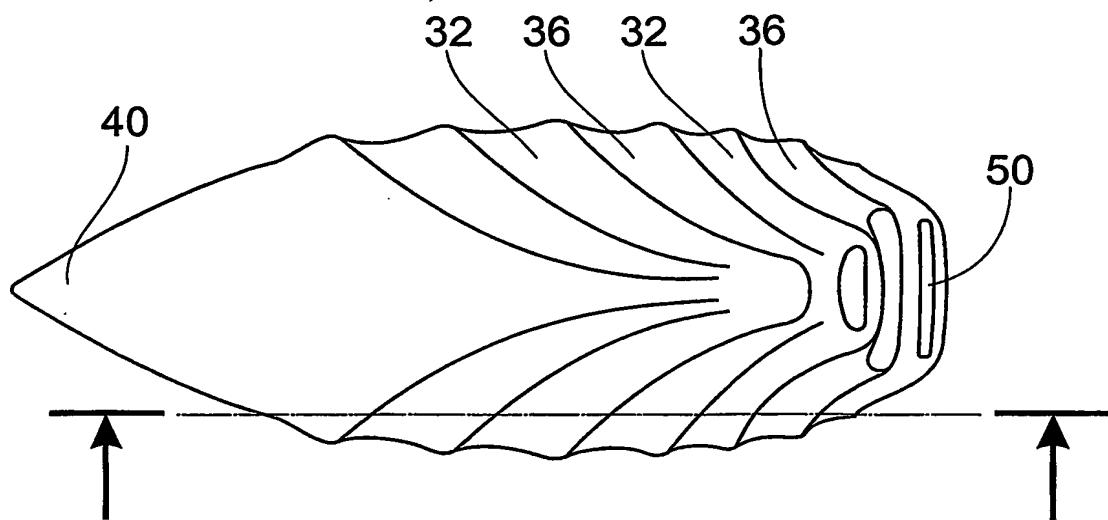


FIG. 9

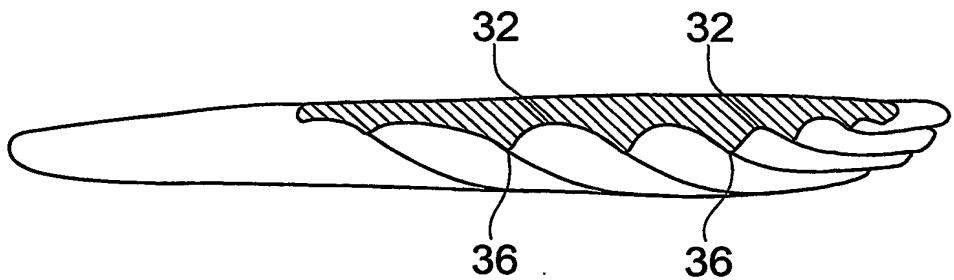


FIG. 10

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU03/01423

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. 7: A63C 5/00, 17/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
DWPI:IPC A63C 5/-; 17/- & keywords: board, snow, ski, sand, rock, groove, channel, steer, turn, brake; and similar terms.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 154310 A (FLORJANCIC) 11 September 1985 Whole document	1-13
X	GB 2209951 A (HAYWARD) 1 June 1989 Whole document	1-13
A	US 4974868 A (MORRIS) 4 December 1990 Whole document	1-13

Further documents are listed in the continuation of Box C See patent family annex

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"B" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

18 December 2003

Date of mailing of the international search report

7 JAN 2004

Name and mailing address of the ISA/AU

AUSTRALIAN PATENT OFFICE
PO BOX 200, WODEN ACT 2606, AUSTRALIA
E-mail address: pct@ipaaustralia.gov.au
Facsimile No. (02) 6285 3929

Authorized officer

KAREN VIOLENTE

Telephone No : (02) 6283 7933

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU03/01423

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FR 2612792 A (BOSSOIS) 30 September 1988 Whole document	1-13
A	CA 2264363 A (SERVANT) 2 September 2000 Whole document	1-13

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU03/01423

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
EP	0154310	DE	3407768	DE	3421997
		WO	8503916		DE 3440243
GB	2209951		NONE		
US	4974868		NONE		
FR	2612792		NONE		
CA	2264363	US	6254111		

END OF ANNEX